## REMARKS

The application has been reviewed in light of the Final Office Action mailed May 25, 2006. At the time of the Office Action, Claims 1-9 and 12-17 were pending in this application. Claims 1-9 and 12-17 were rejected.

**Rejections of the Claims under 35 U.S.C. § 102(e)**

**Claims 1, 5-9 and 12 were rejected under 35 U.S.C. § 102(e) as being US Pub. No. 2002/0172195 by Pekkala et al. (hereinafter *"Pekkala"*).**

Applicant respectfully traverses the rejections and submits that the reference relied upon does not disclose what is being claimed in independent claim 1 and all claims dependent thereto. Claims 5-9 and 12 depend from claim 1, and contain all limitations thereof.

The present invention may provide a plurality of input-output (I/O) resources, *e.g.*, Ethernet, SCSI, FC-AL, *etc.*, interface modules, in a multi-server environment, wherein each of the plurality of I/O resources may be allocated to any one of the servers as the operational environment dictates, in a manner that is hardware and software compatible with industry standard I/O subsystems and current software operating systems. Thus the present invention may allocate each of the plurality of I/O resources to selected ones of the servers in the multi-server environment via switches that may behave like multiple I/O bridges. These switches may comprise multiplexers, and input and output buffers, wherein an input buffer and an output buffer pair are coupled to each of the plurality of I/O resources and to each of the servers. The switches may be statically configured so as to couple the appropriate input-output buffer pairs together (I/O module buffer pair coupled to a respective server buffer pair) such that the desired I/O resources may be operationally coupled to respective ones of the servers in the multi-server environment. In addition, each of the selectively coupled I/O resources may appear to an operating system of a respective server as a standard I/O resource for that server and may

be configured as such. Once the host-to-I/O module physical (dedicated connections) mappings are made, each one of the servers may boot up its respective operating system (OS) with the designated and dedicated I/O resources such that the resultant physical topology appears like a conventionally configured I/O system. Present application, p. 12, lines 2-4. No change is required in the server operating system I/O drivers or how each server discovers what I/O assets are coupled thereto. The I/O modules (assets) may be disk drives, Ethernet ports, *etc.*, that are assigned through a mapping table and control logic (element 516 of Figure 5 of the instant application).

In contrast, ***Pekkala*** discloses a transaction switch that routes data packets and data transfer commands between I/O interfaces having the same or different data protocols and a shared buffer memory. Thus, the ***Pekkala*** invention may be used in any network device in which data must be buffered and routed between two different protocol interfaces. ***Pekkala*** at par. 60. To do this the ***Pekkala*** invention requires an IB switch 106 and IB I/O units 108 in order to physically interface between the computers 102 and the plurality of I/O devices 112. ***Pekkala*** at Fig. 1.

***Pekkala*** requires an IB host channel adapter 104 for converting data from the computer 102 into IB data packets, then the IB switch 106 dynamically directs appropriate IB data packets to an IB I/O unit 108. The IB I/O unit 108 then converts the IB data packets into native data signals on a standard data bus 116, *e.g.*, PCI, for coupling to the standard I/O devices 112. Data going from the I/O device 112 to the computer 102 follows similar conversions and routings. The ***Pekkala*** invention allows pooling of I/O resources by dynamically transferring data between a server and an I/O resource, but at the expense of software protocol conversion time delays and packet switching latencies. Thus, ***Pekkala*** does

not disclose, expressly or inherently, "statically couples selected ones of the at least one server I/O ports to selected ones of the module I/O ports so that each of the plurality of server modules will boot its operating system and recognize the statically coupled ones of the module I/O ports," as recited in Claim 1.

Pursuant to MPEP § 2131: A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). And the elements must be arranged as required by the claim.

**Rejections of the Claims under 35 U.S.C. § 103(a)**

**Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pekkala* in view of Applicant's alleged admitted prior art.**

Applicant respectfully traverses the rejection and submits that the references relied upon do not teach or suggest, individually or in combination, what is being claimed in independent claim 1 and all claims dependent thereto. Claim 2 depends from claim 1, and contains all limitations thereof.

As discussed above, ***Pekkala*** teaches dynamically transferring data packets and data transfer commands between I/O sources and any one or more of the processors with software controlled transaction switches. Thus, ***Pekkala*** does not teach or suggest "statically couples selected ones of the at least one server I/O ports to selected ones of the module I/O ports

so that each of the plurality of server modules will boot its operating system and recognize the statically coupled ones of the module I/O ports," as recited in Claim 1.

**Claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pekkala* in view of U.S. Patent No. 6,564,274 by Heath et al. (hereinafter "*Heath*").**

Applicant respectfully traverses the rejections and submits that the references relied upon do not teach or suggest, individually or in combination, what is being claimed in independent claim 1 and all claims dependent thereto. Claims 3 and 4 depend from claim 1, and contain all limitations thereof.

***Heath*** teaches a host processor and client processors packaged in a single box and connected together over a high speed bus. A standard bus such as PCI may be used. Neither ***Heath*** nor ***Pekkala***, individually or in combination, teach or suggest "statically couples selected ones of the at least one server I/O ports to selected ones of the module I/O ports so that each of the plurality of server modules will boot its operating system and recognize the statically coupled ones of the module I/O ports," as recited in Claim 1.

**Claims 13 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pekkala* in view of U.S. Patent No. 5,872,904 by McMillen et al. (hereinafter "*McMillen*").**

Applicant respectfully traverses the rejections and submits that the references relied upon do not teach or suggest, individually or in combination, what is being claimed in independent claim 1 and all claims dependent thereto. Claims 13 and 14 depend from claim 1, and contain all limitations thereof.

***McMillen*** teaches a massively parallel computer system that may automatically reconfigure itself upon detection of a fault. Neither ***McMillen*** nor ***Pekkala***, individually or in combination, teach or suggest "statically couples selected ones of the at least one server I/O ports

to selected ones of the module I/O ports so that each of the plurality of server modules will boot its operating system and recognize the statically coupled ones of the module I/O ports," as recited in Claim 1.

**Claims 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pekkala* in view of *McMillen* as applied to claims 13 and 14, and further in view of U.S. Pub. No. 2003/0037224 by Oehler et al (hereinafter "*Oehler*").**

Applicant respectfully traverses the rejections and submits that the references relied upon do not teach or suggest, individually or in combination, what is being claimed in independent claim 1 and all claims dependent thereto. Claims 15 and 16 depend from claim 1, and contain all limitations thereof.

Neither ***Oehler*** nor ***Pekkala***, individually or in combination, teach or suggest "statically couples selected ones of the at least one server I/O ports to selected ones of the module I/O ports so that each of the plurality of server modules will boot its operating system and recognize the statically coupled ones of the module I/O ports," as recited in Claim 1.

**Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pekkala* in view of U.S. Pat. No. 6,826,196 by Lawrence (hereinafter "*Lawrence*").**

Applicant respectfully traverses the rejections and submits that the references relied upon do not teach or suggest, individually or in combination, what is being claimed in independent claim 1 and all claims dependent thereto. Claim 17 depends from claim 1 and contains all limitations thereof.

***Lawrence*** teaches establishing virtual circuit connections over data links that may or may not inherently support virtual circuits. The switch taught in ***Lawrence*** includes an arrangement of a label switching system (LSS) and one (or more) connection routing and

signaling controller(s) (connection controllers). The LSS may include a data-forwarding engine and a label encapsulation unit. A connection control interface provides an interface between the connection controller and the label switching system. The switch allows arbitrary types of connections to be established over arbitrary link types. The arbitrary link types include link types that do not inherently support virtual circuits. Thus, private network-to-network interface (PNNI) routing may be establish over Ethernet links.

Neither ***Lawrence*** nor ***Pekkala***, individually or in combination, teach or suggest "statically couples selected ones of the at least one server I/O ports to selected ones of the module I/O ports so that each of the plurality of server modules will boot its operating system and recognize the statically coupled ones of the module I/O ports," as recited in Claim 1.

All amendments are made in a good faith effort to advance the prosecution on the merits. Applicant reserves the right to subsequently take up prosecution on the claims as originally filed in this or appropriate continuation, continuation-in-part and /or divisional applications.

Applicant respectfully requests that the amendments submitted herein be entered, and further requests reconsideration in light of the amendments and remarks contained herein.

Applicant respectfully requests withdrawal of all objections and rejections, and that there be an early notice of allowance.

## SUMMARY

In light of the above amendments and remarks Applicant respectfully submits that the application is now in condition for allowance and early notice of the same is earnestly solicited. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone or facsimile.

Applicant believes that there are no other fees due in association with the filing of this Response. However, should the Commissioner deem that any other fees are due, including any fees for a further extension of time, Applicant respectfully requests that the Commissioner accept this as a Petition Therefor, and direct that any and all fees due are charged to Baker Botts L.L.P. **Deposit Account No. 02-0383, Order Number 016295.1401.**

Respectfully submitted,
BAKER BOTTS L.L.P. (023640)

By: Paul N. Katz

Paul N. Katz
Reg. No. 35,917
One Shell Plaza
910 Louisiana Street
Houston, Texas 77002-4995
Telephone: 713.229.1343
Facsimile: 713.229.7743
Email: Paul.Katz@bakerbotts.com
ATTORNEY FOR APPLICANT

DATE: July 24, 2006